

Amendments to the Claims:

This Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-15. (Previously Canceled)

16. (Currently Amended) A composite core comprised of:

a matrix material, the matrix material further comprising:

a chemical formulation comprising at least a resin, at least one hardener and one or more accelerators, said formulation having elongation properties in excess of glass fiber elongation properties; and

a plurality of longitudinally extending fibers of one or more fiber types embedded in the matrix material to form a fiber/resin matrix;

wherein, the fiber/resin matrix is cured at a curing temperature of from about 350 °F to about 500 °F to form the composite core.

17. (Previously Presented) A composite core according to claim 16, wherein the composite core comprises two or more fiber types.

18. (Previously Presented) A composite core according to claim 17, wherein one fiber type is glass.

19. (Previously Presented) A composite core according to claim 17, wherein one fiber type is carbon.

20. (Previously Presented) A composite core according to claim 17, wherein the composite core comprises carbon fibers surrounded by glass fibers, the core having a carbon/glass fiber ratio that produces a composite core having a predetermined set of mechanical properties.

21. (Previously Presented) A composite core according to claim 20, wherein the carbon/glass fiber ratio may be adjusted to change the mechanical properties of the core.

22. (Previously Presented) A composite core according to claim 16, wherein at

least one of the one or more fiber types comprises a modulus of elasticity in excess of glass fiber.

23. (Previously Presented) A composite core according to claim 16, wherein the composite core comprises one fiber type having a modulus of elasticity in the range of about 6 to about 15 Ms.

24. (Previously Presented) A composite core according to claim 23, wherein the fiber type is S-glass.

25. (Previously Presented) A composite core according to claim 16, wherein at least one of the one or more fiber types comprises a modulus of elasticity in excess of glass fiber and at least one of the one or more fiber types is glass.

26. (Previously Presented) A composite core according to claim 16, further comprising a protective coating surrounding the core.

27. (Previously Presented) A composite core according to claim 26, further comprising one or more layers of conductor surrounding the core.

28. (Previously Presented) A composite core according to claim 16, further comprising one or more layers of conductor surrounding the core.

29. (New) A composite core as recited in Claim 16, wherein the matrix material has an elongation of greater than about 3%.

30. (New) An aluminum conductor composite core reinforced cable, comprising:
a composite core comprising a matrix material, the matrix material further comprising:

a chemical formulation comprising at least a resin, at least one hardener and one or more accelerators, said formulation having elongation properties in excess of glass fiber elongation properties; and

a plurality of longitudinally extending fibers of one or more fiber types embedded in the matrix material to form a fiber/resin matrix;

wherein, the fiber/resin matrix is cured to form the composite core; and

one or more layers of aluminum conductor surrounding the core.

31. (New) An aluminum conductor composite core reinforced cable according to Claim 30, wherein the one or more layers of aluminum conductor surrounding the core comprise an aluminum conductor helically wound around the core.

32. (New) An aluminum conductor composite core reinforced cable according to Claim 30, wherein the composite core comprises two or more fiber types.

33. (New) An aluminum conductor composite core reinforced cable according to Claim 32, wherein one fiber type is glass.

34. (New) An aluminum conductor composite core reinforced cable as recited in Claim 32, wherein one fiber type is carbon.

35. (New) An aluminum conductor composite core reinforced cable according to Claim 30, wherein the composite core comprises one fiber type having a modulus of elasticity in the range of about 6 to about 15 msi.